

**IN THE DRAWINGS**

**Please amend the Drawings as attached herein:**

**REMARKS**

Claims 1-12 are rejected. Claims 1 is an independent claim. Claim 1 has been amended. Claims 1-12 are pending in the application.

Reconsideration of all grounds of rejection in the Office Action based upon the above amendments, and allowance of all of the pending claims are respectfully requested in light of the following remarks.

Applicant has amended the title in response to Office Action's finding that prior title was not descriptive. If the above title is not adequate, the applicant invites any suggestion that the Examiner might present.

Specification and drawings have been amended to remove typographical errors.  
No new matters have been added.

I. Rejection of Claim 1 under 35 U.S.C. §102(e) as allegedly anticipated by Hurley (U.S. 6,775,444/530 B1)

Claims 1, 3-4 and 9 -11 stand rejected under 35 U.S.C 102(e) as allegedly anticipated by Hurley (U.S. 6,775,444/530 B1), hereafter "Hurley,"**444**." Applicants respectfully traverse the rejection of claim 1 over Hurley,'**444** because instant claim 1 proposes a fiber optic cable comprising a plurality of tight buffer optical fibers, which does not include a central strength member in its center.

The Office Action indicates that Hurley' **444** Fig 1 through 11 shows an interior optical cable having a plurality of s-z stranded tight buffer optical fibers 21, 21', 22, 22', a subsidiary tension member 24' surrounding the outer circumference of the optical fibers and an outer coating 26, 26' formed of PVC or polyethylene by extrusion wherein the tight buffer optical fibers has a predetermined lay ratio to the outer coating layer. Thus,

the Office Action states that it is inherent that each of the optical fibers has a core, a clad layer surrounding the core, a coating layer surrounding the clad layer and a tight coating layer surrounding the coating layer.

However, Applicant respectfully submits that the Office Action fails to take note of the fact that the current invention does not include a central strength member, as recited in the base claim.

In contract, the prior art reference, Hurley '444 includes a central strength member. Both embodiments suggested by Hurley '444 include a central strength member: embodiment no. 1 sees Fig 4A, 4B, reference 23 ("central member") (column 3, line 44 – 48) found in Claim 1 and embodiment no. 2 see Fig 8 reference 82 and Fig 9, reference 23 ("rigid central member") (column 6, line 67 column 7, line 2 – 7).

As disclosed in applicant's description of the prior art, ". . . a central tension member 110 provides tensile strength to the interior optical cable." (Page 2, line 6 – 7) . . . and . . . "prevents the interior optical cable from being damaged due to shrinkage rate differences between sub-unit cable 120 and the outer coating member 150, when the interior optical cable is contracted due to variations in the *external temperature*. (Page 3, line 3 – 6) (Emphasis added) Hurley '444, addressed a perceived problem with poor performance of a conventional fiber optical cable in "crush and bend testing due to a rigid central member" (Column 1, line 28 -29). Thus, Hurley '444 does not address temperature effects on fiber optic cables but addresses the effect of pressure exerted on fiber optic cables.

As disclosed in the applicant's description of the prior art, a fiber optic cable that does not include a central tension member has been proposed. (Page 3, line 9 – 10) see.

FIG. 2. The difficulty encountered in producing a fiber optic cable that does not include a central tension member is the "... structure of such an interior optical cable without the central tension member is damaged by the variation in external temperature such as low or high temperature." (Page 4, line 3 -4). Accordingly, without a central tension member, there is a great deal of shrinkage rate difference, between the outer coating layer 150 and the sub-unit 120, due to variations in external temperature. (Page 5, line 3 - 6). This shrinkage between the outer coating layer and sub-unit due to external temperature variations is referred to as "post-shrinkage." (Page 5, line 6 - 7). The present invention overcomes the temperate effects and resulting post-shrinkage as embodied in claim 1, as amended. The benefits of an interior optical cable lacking a central strength and including tight buffer optical fibers having a predetermined lay ratio in the range of -0.3 to 0.3% to the outer coating layer is illustrated in FIG. 7. As set forth in the specification on page 11 to 12:

... variation in the external temperature and exposure to low temperature is in the range of 1.1 to 1.5%. That is, lay ratio of the tight buffer optical fiber of the conventional interior optical cable is increased by more than 1%. Thus, it serves as a factor for increasing the post-shrinkage rate of the outer coating layer and the optical loss of the interior optical cable. (Page 11, line 24 to Page 12, line 4 referring to FIG. 7)

Accordingly, it is respectfully submitted that claim 1, 3-4 and 9 - 11 are not anticipated by Hurley, '444. Therefore, reconsideration and withdrawal of this ground for rejection are respectfully requested.

The other claims in this application are each dependent from the independent claim discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention,

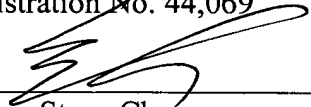
however, the individual consideration of the patentability of each on its own merits is respectfully requested.

The applicants submit that the claims, as they now stand, fully satisfy the requirements of 35 U.S.C. 102 and 103. In view of the foregoing amendments and remarks, favorable reconsideration and early passage to issue of the present application are respectfully solicited.

For all the foregoing reasons, it is respectfully submitted that all of the present claims are patentable in view of the cited reference. A Notice of Allowance is respectfully requested.

Should the Examiner deem that there are any issues, which may be best, resolved by telephone communication, please contact Applicant's undersigned Attorney at the number listed below.

Respectfully submitted,  
Steve Cha  
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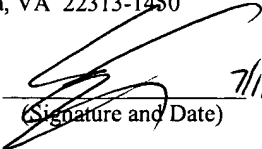
  
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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to Mail Stop Amendment, Commissioner For Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on July 1, 2005.

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(Signature and Date)

7/1/05